

N^o 12,257



A.D. 1901

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COMPLETE SPECIFICATION.

“Improvements in Soap Presses”.

I, GUSTAV ADOLF KLUMPP, of 6 Klusestrasse, Lippstadt, in the Empire of Germany, Manufacturer, do hereby declare the nature of this invention and in what manner the same is to be performed, to be particularly described and ascertained in and by the following statement:—

5 The cooling of liquid masses of soap has hitherto been performed in open boxes, so that soap slabs were formed which were cut after cooling into suitable tablets, bars and pieces.

The process hitherto employed had several drawbacks, the principal of which was that the cooling or hardening of the soap mass occupied a very long time, 10 for instance from 8 to 14 days. A second great drawback was that in consequence of this slow cooling an unequal contraction of the soap mass took place, so that in cutting up the cooled soap blocks a great quantity of waste resulted, which had to be again dealt with as raw material.

This invention has for its object a chilled soap press which avoids these draw- 15 backs by the liquid soap mass being rapidly cooled down to flat slabs in the chilled moulding boxes under pressure, the weight of the soap slabs being capable of being suitably regulated by an adjustment of the upper plate of the moulding box relatively to the under plate of the same, and which slabs leave no waste when cut up, as any contraction of the cooling soap mass is avoided by 20 the firm pressure of the upper plate of the moulding box which is capable of regulation.

A cooled soap press of this kind is shown in the accompanying drawings, in which,

Fig. 1 is an elevation partially in vertical section;
25 Fig. 2 the upper plate of the moulding box seen from beneath; and
Fig. 3 is a view of the same seen from above.

A hollow under plate *a* is arranged on the frame of the press as a base for the fixed moulding frame *g*, which hollow under plate is provided in any suitable manner with an inlet aperture and also an outlet for the cooling water.

30 The upper plate *b* of the box is for the same object also hollow and has a water inlet nozzle *c* and a water outlet. This upper plate fits exactly in the moulding box frame *g* and is guided on the columns *f* of the frame of the press by means of lateral lugs or rings *e*. The upper plate *b* forms with the moulding box frame *g* and the under plate *a* a moulding chamber, the height of which may 35 be suitably regulated by an optional adjustment of the upper plate to the under plate within certain limits, so that thus also the quantity and weight of the slabs of soap to be formed may be exactly determined. The adjustment of the upper plate *b* is effected by means of a pressure spindle *h*, which is for this object provided at its upper end with a hand wheel *i* and is adapted to be screwed up 40 and down in a cross bar or stretcher *k* of the frame.

As shown in Fig. 1 the feed hopper *l* is preferably so arranged that the soap mass flows into the moulding box by its own weight as soon as a valve or slide which closes the inlet aperture *p* is opened by any suitable means at the

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place where the liquid mass flows into the press. This valve is not shown in the drawing as the closing of the inlet aperture may be effected in any suitable manner. The hopper *l* is also preferably surrounded by a hollow casing *m* in order to be capable of being heated by steam or hot water.

The discharge pipe *n* of the hopper *l* fits closely and 5
tightly to the outer wall of the moulding box frame *g* at the place where the inlet aperture *p* for the soap mass is situated. When the moulding box of the press is filled the valve is again closed and the upper plate *b* is lowered in the frame *g* by means of the pressure spindle *h*. The soap mass cools in a few minutes in consequence of the cooling by water of the 10
plates *b* and *a*. During this time it is so pressed by means of the pressure spindle *h* that no contracted places can form which result in waste in the subsequent cutting up of the soap slab.

The construction of the press may be modified in practice in various ways, thus the upper or the under, or both plates may be provided with impressions 15
or dividing ribs which are imprinted on the soap slab in consequence of the pressure. Further the moulding boxes may be so divided by partitions that the soap is immediately divided into pieces of a given size and weight when it is not preferred to effect this division later on.

The inlet aperture *p* for the soap mass is preferably arranged in practice in 20
the centre of the longest side of the frame *g*, and in the drawing which is intended to show as diagrammatically as possible a form of construction as an example, is only arranged on the narrow side for the purpose of clearness.

In place of a fixed frame *g*, a downwardly projecting edge may also be arranged on the upper plate, which edge on the downward movement of the upper plate, 25
tightly encloses the outside of the bottom plate, so that in this manner a moulding box is formed. In this case of course, the inlet opening *p*, which is provided with a suitable closing device or valve for the liquid soap mass, must be arranged on this edge of the upper plate, and the edge must in the lowest position fit closely on the inlet pipe *n* for the soap mass. 30

The moulding box *g* may also be firmly connected with the under plate *a* but in practice the arrangement shown in Fig. 1 of a fixed frame *g* in which the upper plate and also the under plate are adjustably removable, is to be preferred. The advantage of this arrangement is that after the moulding and pressing of the soap slab has been effected and after the elevation of the upper 35
plate, the soap slab made may be easily removed from the fixed frame by raising the bottom plate. In this case the pipe *n* from the hopper *l* may be firmly connected with the frame.

Instead of the press being arranged vertically as shown in the drawings it may of course be arranged horizontally. 40

Having now particularly described and ascertained the nature of my said invention and in what manner the same is to be performed, I declare that what I claim is:—

1. A soap press adapted for making moulded pieces of soap from a hot and fluid soap mass, characterised by the bottom plate and under plate being pro- 45
vided with a hollow space for receiving cooling water, and by the moulding box, which is closed by the adjustment of the upper plate, having an inlet opening for the liquid soap mass capable of being closed in any suitable manner, substantially as described.

2. A form of construction of soap moulding press such as described, charac- 50
terised by the upper plate being arranged in such a way as to be adjustable by means of a pressure spindle, with the object of enabling the thickness of the soap slab to be regulated at will and of preventing contraction and deformation of the soap slabs, substantially as described.

3. A form of construction of soap moulding press such as described, charac- 55
terised by the bottom plate being adjustable in the fixed moulding frame in

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order to permit of the finished soap slab being conveniently removed from the moulding box by the displacement or elevation of the bottom plate, substantially as described.

Dated this 14th day of June, 1901.

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[This Drawing is a reproduction of the Original on a reduced scale.]

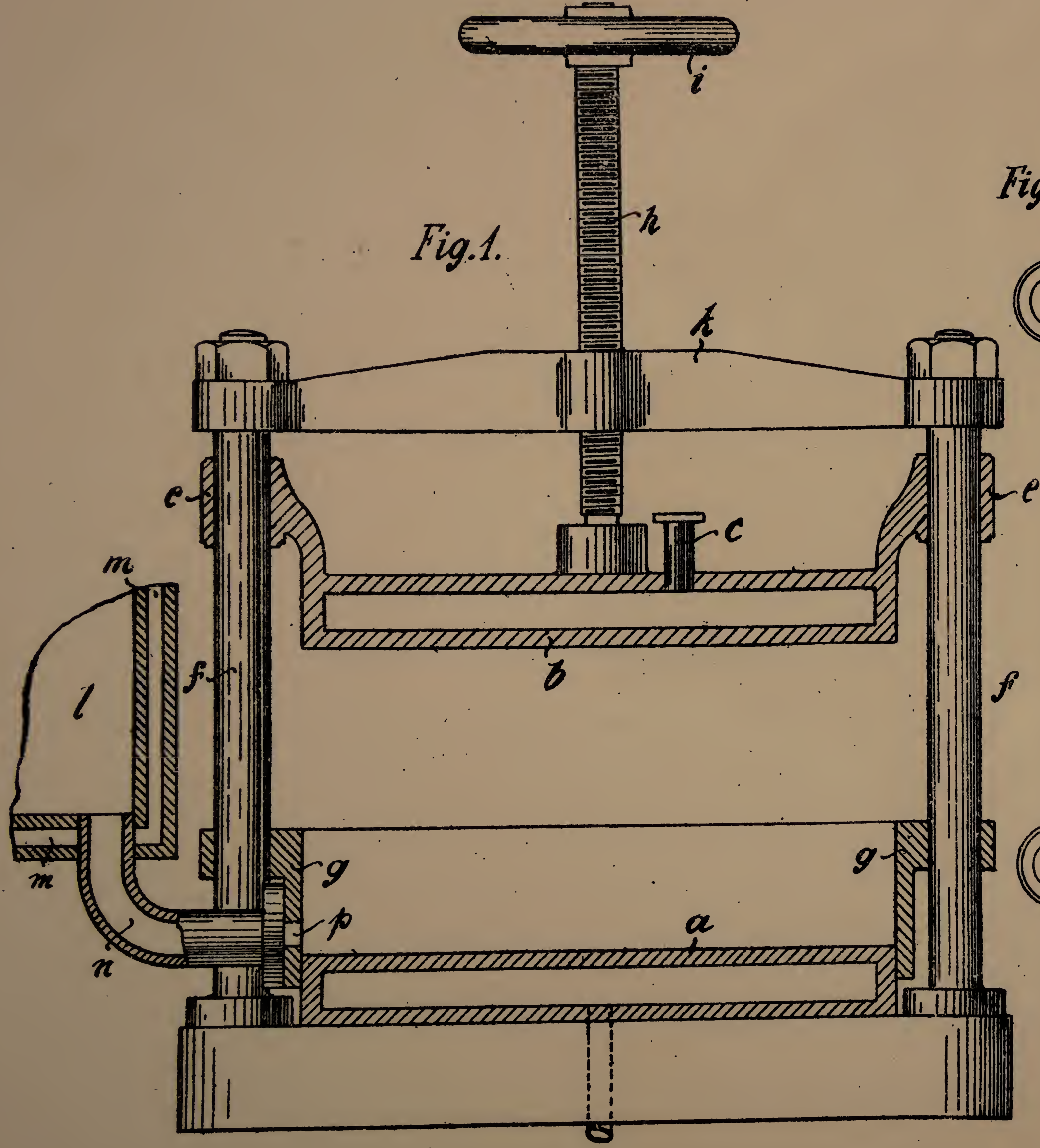


Fig. 2.

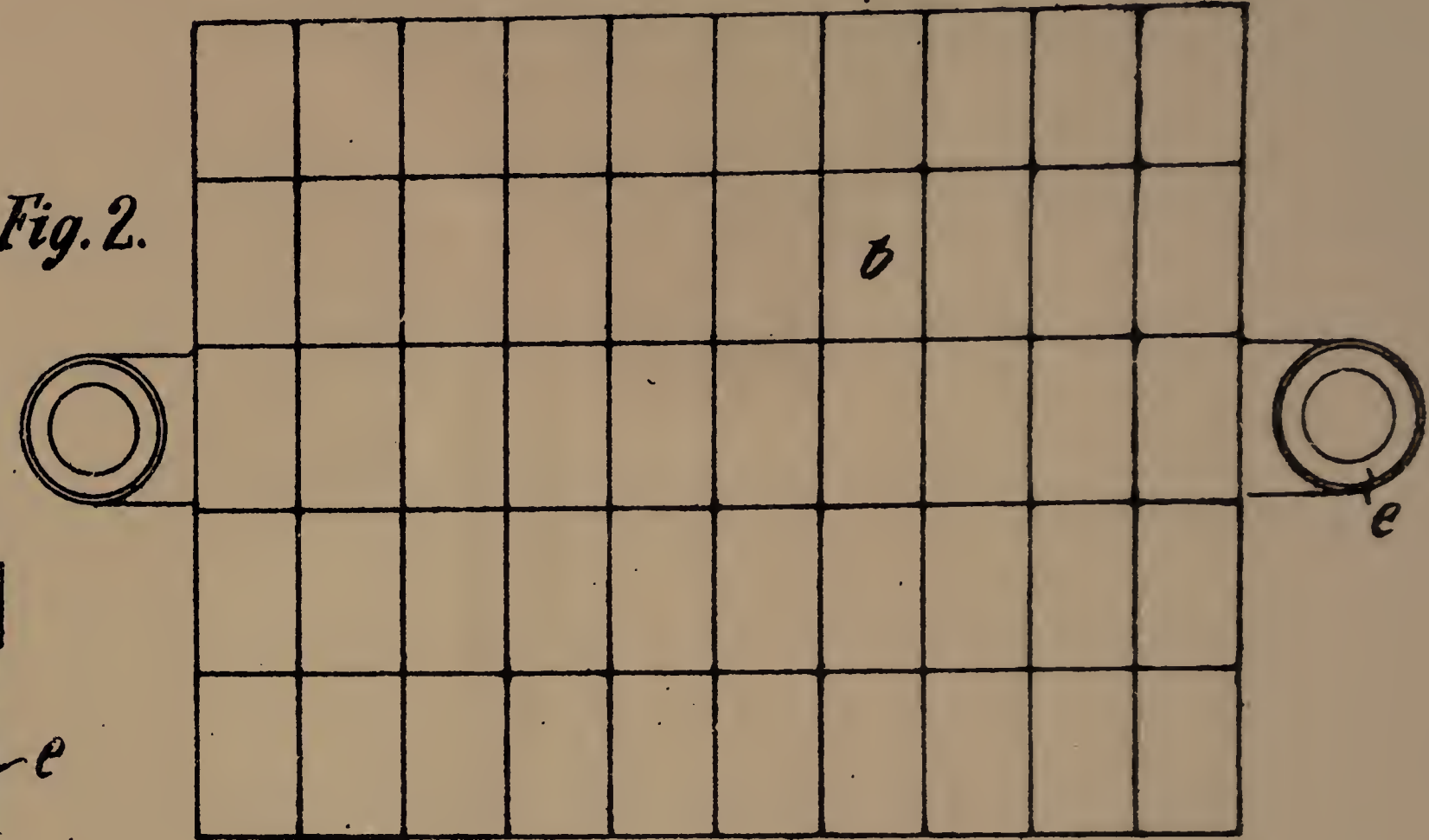


Fig. 3.

